



 **Green** Inland Ports

# Good Practices

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# 01

## Sustainability programmes



# 1.0 Sustainability programmes

## 1.1 Description

To help organisations to reduce their environmental impact, sustainability programmes are helpful. In North America a port specific programme exists that we identified as a good practice: **Green Marine**.

Green Marine is an initiative that brings several types of participants together, such as ship owners, ports, terminals, shipyards, and the Seaway corporations based in Canada and the United States to create transparency in the greening efforts of participants. The Green Marine programme is also being trialled in Europe; more details of which can be found [here](#).

To obtain Green Marine certification, participants must complete the certification process, which includes an annual self-evaluation, an external verification by a verifier accredited by Green Marine (in which the ports themselves measure and deliver the data) and publication of the results at the annual GreenTech (by Green Marine) conference. Participants must demonstrate a yearly improvement of one level for at least one performance indicator until level 2 is achieved for all applicable performance indicators (Green Marine, n.d.-a, n.d.-c). There are currently nine performance indicators on which ports are ranked, and seven performance indicators on which terminals are being ranked, namely:

- Air emissions – Greenhouse gases
- Community impacts
- Community relations
- Dry bulk handling and storage
- Environmental leadership
- Spill prevention and stormwater management
- Waste management
- Underwater noise (only ports, not terminals)
- Aquatic ecosystems (only ports, not terminals)

Every organisation is ranked on the performance indicators between level 1 (the lowest ranking, equal to the monitoring of legislation) and level 5 (the highest ranking, for which requirements get quite specific) (Volduc, D. & Kirtley, E., 2023).

The results of organisations that are part of the programme are shown on the Green-Marine website. Based on this, an organisation learns which performance indicators they can make the most progress with, based on an anonymous port's certification process.



Figure 1 – Levels scale of participant's environmental performance (Green Marine, 2022).



Figure 2 – Example of Green Marine score for an anonymous port in 2022<sup>1</sup> (Green Marine, n.d.-b)



This port is very advanced within the spill prevention and stormwater management, as it has a level 5 result on this topic. On greenhouse gases and community relations, a result of level 1 has been rewarded, which means that they are compliant with relevant regulations. The other performance indicators are somewhere in between.

## 1.2 Specific aim/goal of the measure

In 2007, Green Marine was originally established to deal with aquatic invasive species. Currently, it is the leading environmental certification program for North America's maritime industry. The goal is to help participants to improve their environmental performance beyond mandatory regulations (Green Marine, n.d.-b).

<sup>1</sup> The performance indicator are similar to, but not identical to the performance indicators mentioned in the text. After 2022, a few performance indicators have been added, which are not present in this figure.

## Ports that have implemented sustainability programmes

Green Marine has not been extended to ports within Europe. Only Green Marine US is active for ports within the United States and Canada. This involves both seaports and inland ports, located on lakes and rivers. Currently, 65 ports are on the participants lists of Green Marine. The programme was originally aimed at inland ports located at the great lakes (Volduc, D. & Kirtley, E., 2023).

## Stakeholders

- Green-Marine: Green-Marine has to expand their certification programme to Europe, or has to start collaborating with other parties that are able to initiate the programme within Europe. They would be responsible for maintaining the website, on which the certification scores for each port would be displayed.
- Port authority: The port authority decides if they want to join the certification programme. They also decide which developments will be made to reach a higher level within the performance indicators.

## Voluntary or mandatory

The programme is a voluntary initiative, in which the ports themselves measure and deliver the data. There are no direct benefits in achieving higher levels and increasing development within the programme, but the programme serves the goal of a license to operate (Volduc, D. & Kirtley, E., 2023).

## Realised impact

Green Marine released a 2022 performance report on their website (Green Marine, 2022). It shows that Green Marine's memberships has increased more than five-fold since the program's inception 15 years ago. Over these 15 years, a clear upward trend is visible in continual improvement and growth of the participants of Green Marine. For ports, the most significant progress has been made in the reduction of GHG and air pollutants compared to 2021.

### 1.3 Possible obstacles when implementing

- So far, it is a voluntary programme, therefore ports can choose whether to cooperate or not. Above all, ports undertake self-evaluations, which may lead to more positive results than in reality.

- There are no direct penalties or rewards. The system is based on a social license to operate within the industry, as in the eyes of the market drivers, there is more incentive to reach more sustainability.
- Currently in Northern America, there are other 'competitors' within the measuring of sustainability of the maritime sector. Many competitors could lead to less transparency and different results for ports, which makes it difficult for market parties to choose who they would like to collaborate with.

## 1.4 Key learnings

- Participants of Green Marine are pushed to show continuous development. Green Marine also plays a role in this development, however intrinsic motivation is important so that each participant shows a yearly improvement in at least one level of performance. Green Marine also develops new performance indicators over time, which means that participants must continue becoming more sustainable.
- A certification programme like this can serve as a license to operate.

## 1.5 Sources

**Green Marine**, 2022. *Performance Report 2022*, Québec:

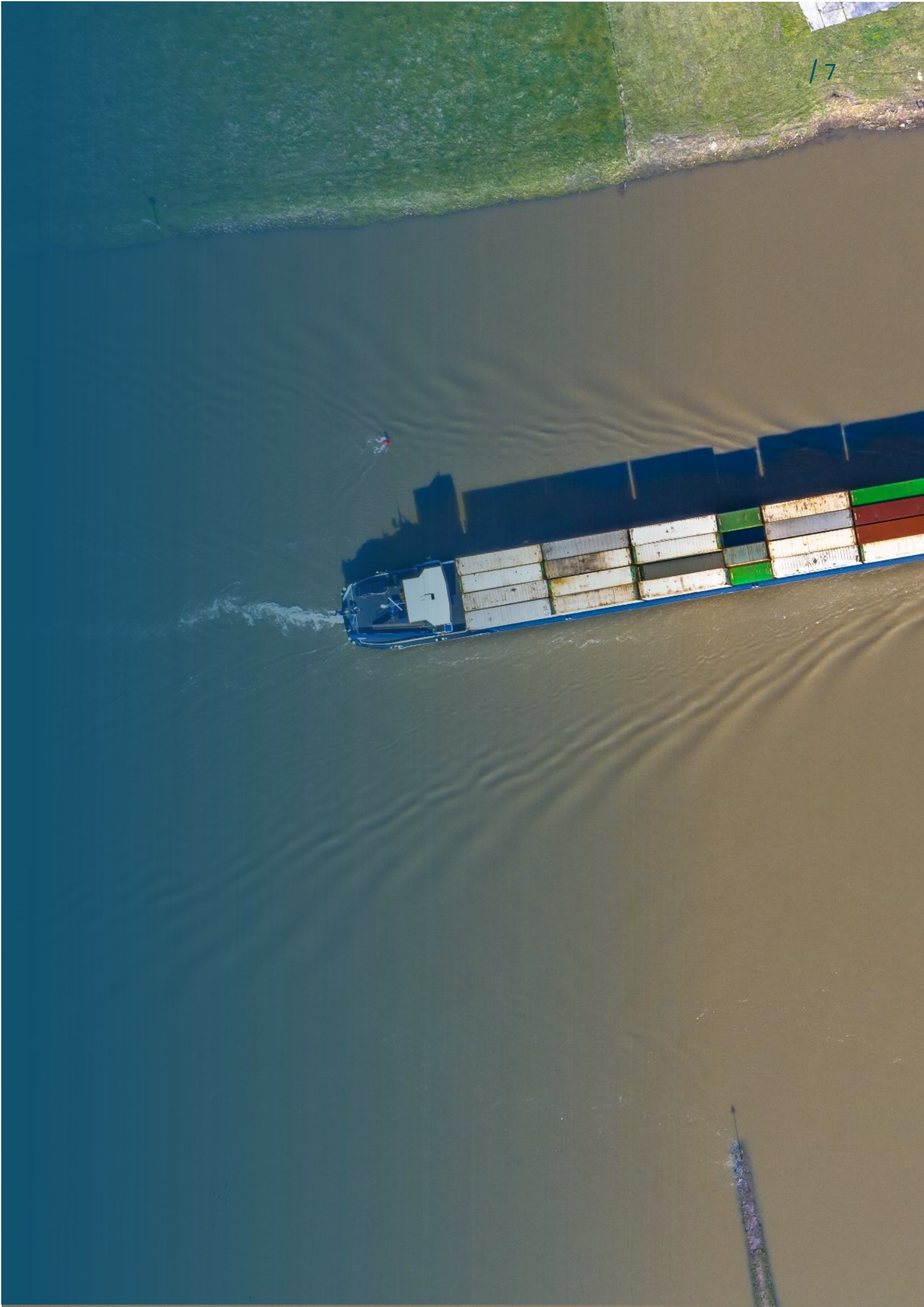
**Green Marine**.n.d.-a.About us, <https://green-marine.org/about/>.

**Green Marine**.n.d.-b.Advancing Environmental Excellence, <https://green-marine.org/>.

**Green Marine**.n.d.-c.Certification process,

<https://greenmarine.org/certification/certification-process/>.

**Volduc, D. & Kirtley, E.**, 2023. Interview Green Marine 27-7-2023.



17